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C. Huby  
2. A wave digital filter according to claim 1, wherein the controlled gate of the adapter comprises a latch.

3. A wave digital filter according to claim 1, wherein the controlled gate of the adapter comprises a strobe gate.

4. A wave digital filter according to claim 1, wherein the controlled gate of the adapter is opened when the value to be delayed by the controlled gate is expected to be valid.

5. A wave digital filter according to claim 1, wherein the value to be delayed by the controlled gate of the adapter is one or two or more of values required to perform a function, and wherein the controlled gate is opened when the two or more values required to perform the function are expected to be valid.

6. A wave digital filter according to claim 1, wherein the controlled gate of the adapter is opened when substantially the two or more values entering the adapter are expected to be valid.

7. A wave digital filter according to claim 1, comprising a delay unit to delay the propagation of the value into an input of the adapter for a predetermined time period.

8. A wave digital filter according to claim 7, wherein the delay unit comprises said controlled gate.

9. A wave digital filter according to claim 7, wherein the delay unit comprises an uncontrolled delay element.

10. A wave digital filter according to claim 7, comprising two or more adapters wherein the delay unit is able to delay the propagation of the value such that the value enters one of

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*Sub*  
the two or more adapters substantially simultaneously with another value received by another adapter of the two or more adapters.

*C 4*  
13. A wave digital filter according to claim 1, wherein the adapter comprises two or more ports.

*C 3*  
16. A wave digital filter according to claim 1, wherein the adapter comprises a multiplier.

*C 4*  
18. A wave digital filter according to claim 1, wherein the two or more adapters comprise two or more different types of adapters.

*C 5*  
20. A wave digital filter, comprising:  
an adapter having a delay unit to delay the propagation of a first value into a first input of the adapter such that the first value is received substantially concurrently with a second value at a second input of the adapter.

21. A wave digital filter according to claim 20, wherein the delay unit comprises said controlled gate.

22. A wave digital filter according to claim 20, wherein the delay unit comprises an uncontrolled delay element.

*Sub*  
23. A method comprising:  
delaying propagation of an input signal value into a memoryless adapter of a wave digital filter until the input signal value is valid; and  
enabling the memoryless adapter to calculate the valid value [to the adapter].

*C 6*  
29. A method comprising:  
delaying propagation of an input signal value on a first input of a memoryless adapter until a valid value is received on a second input of the memoryless adapter; and  
enabling the adaptor to calculate the delayed value [to the adapter].

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41. A wave digital filter according to claim 1, wherein the controlled gate is able to delay the propagation of the value until a predetermined number of changes in the value occur.

53. A wave digital filter, comprising:  
a controlled gate to control the propagation of a value generated by a first adapter to a second on the validity of the value.

Attached hereto is a marked-up version of the changes made by the current amendment. The attached pages are captioned "Version with Markings to Show Changes Made".